





What's New with Flu

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Agenda

- ◆ Avian Influenza -
 - Update of current disease progression
 - Status of DoD Readiness
 - Antivirals
 - Vaccine
 - Plans
 - Request for AFEB review of AI planning



Is There A Pandemic?

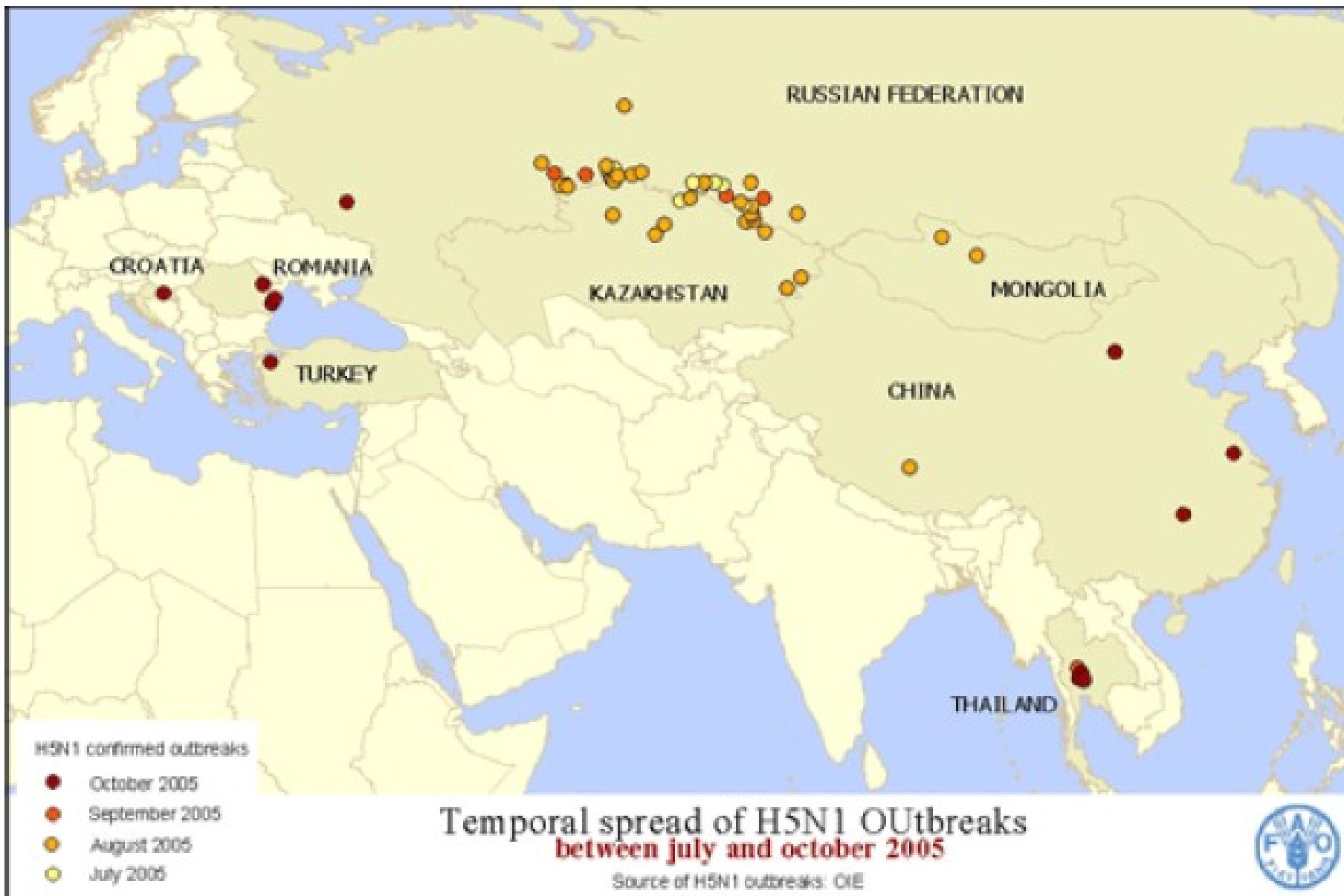


Only if you are a bird

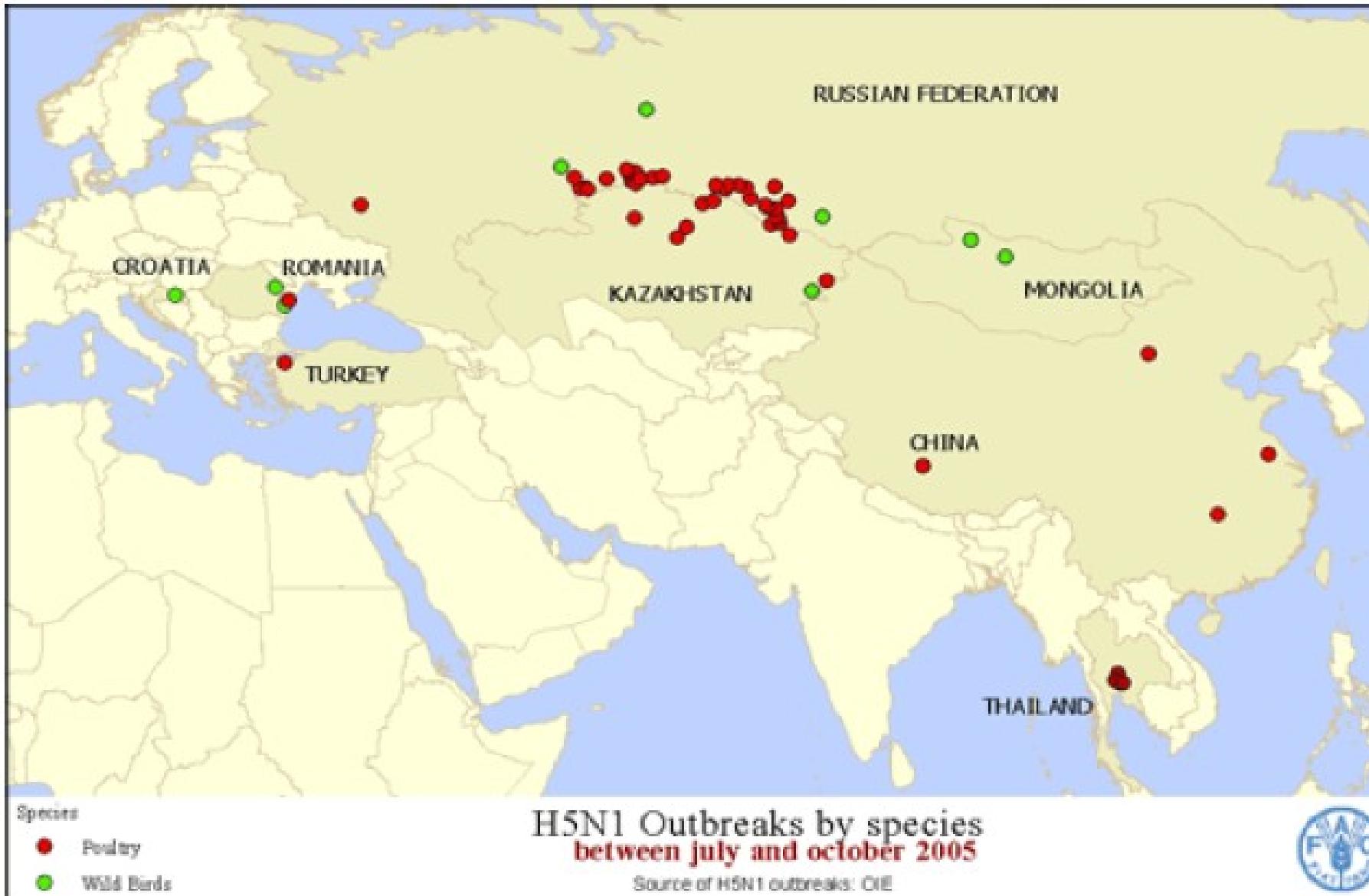


Avian Disease

- ◆ 15 Countries with confirmed avian disease
- ◆ Spread to European Russia-ducks, chickens, geese (9 pigs without clinical disease but sero+)
- ◆ Croatia -swans
- ◆ Turkey-back yard flock of turkeys
- ◆ Romania-laying hens and ducks in a single back yard
- ◆ Great Britain- 2 parrots imported from Surinam but housed in a quarantine facility with birds from Taiwan



Map 4: temporal spread of HPAI, H5N1 from July to October 2005



Map 5: outbreaks by species



Where is
the real
Risk?



Current Best Guess

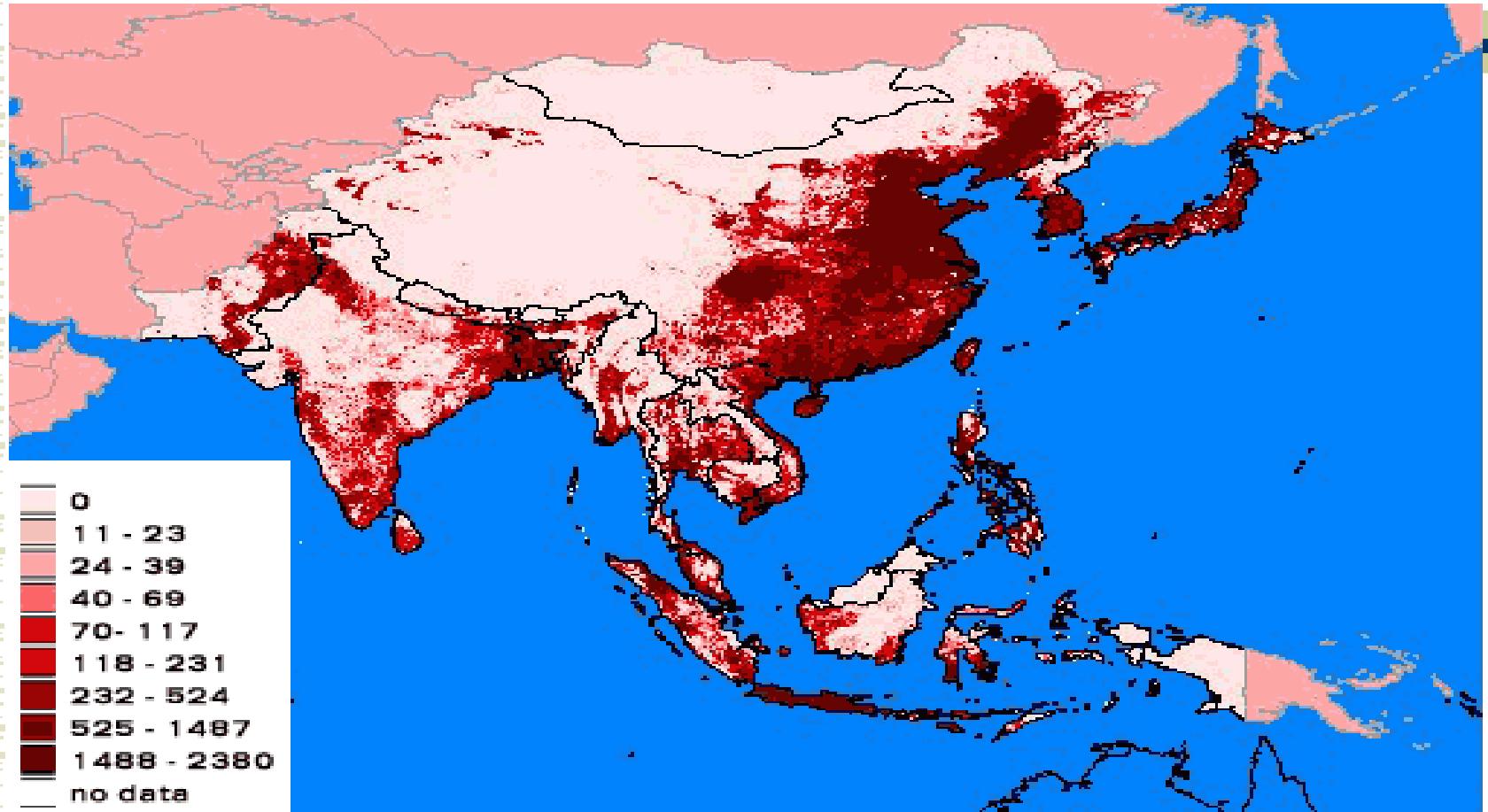
- ◆ Asian H5N1 probably mutated to a highly pathogenic form in domestic poultry and moved back into wild birds.
- ◆ Spread may be primarily due to poultry/game cocks traffic with wild bird migration contributing (Eurasian Tree Sparrow)
- ◆ “More knowledge of the ecology and epidemiology of avian influenza viruses in wild and domestic birds is necessary to truly assess the risk posed for domestic birds from wild birds, and conversely, the risk that domestic birds pose for wild bird populations” (Dr. Emily Jenkins, Dept of Veterinary Microbiology University of Saskatchewan)

Avian Influenza - Human Disease

- ◆ 136 total cases with 71 deaths (29 Nov 2005)
 - 92 cases this year
 - 39 deaths
- ◆ No confirmed human-to-human transmission
- ◆ All recent cases associated with intimate contact with diseased birds

Continued Problems

DENSITY OF POULTRY IN SOUTH-EAST ASIA



Continued containment problems

- ♦ Uncertain transparency
 - H5N1 has been circulating in China for at least a decade
 - Not reported because information on epidemics of High Path AI were State secrets until 2003
 - Currently one laboratory in China has permission to conduct AI research
 - Hong Kong virologist Guan Yi is quoted “avian flu virus can be detected in most poultry markets”

H5N1 and China

- ♦ H5N1 in China before Hong Kong outbreak in 1997
- ♦ PRC veterinary journals suggest H5N1 widespread in China in 1997
 - Jan 2004 first time PRC Ministry of Ag admitted China had H5N1
- ♦ 2004 China established an information reporting system for large scale animal outbreaks
 - 49 Locations reported AI
- ♦ 2005 China became more transparent but
 - PRC Ministries of Health and Agriculture - poor communication

US Risk

- ◆ 3 Million fighting cocks in CA
- ◆ 9.3 Billion commercial chickens
- ◆ 100 Million chickens in unregulated live bird market
- ◆ 60 Million foreign visitors to the US
- ◆ 60 Million US visitors to foreign countries
- ◆ 400 Million crossings in from Mexico
- ◆ Fomite in Viet Nam can be in Boise in two flights

RESPONSE



NATIONAL STRATEGY FOR
PANDEMIC
INFLUENZA



HOMELAND SECURITY COUNCIL

NOVEMBER 2005

National Strategy

Nov 2005

- ◆ Federal government will use all instruments of national power
- ◆ Communities will have credible response plans
- ◆ Private sector should plan an integrated role
- ◆ Individual citizens should be educated about actions to protect themselves and others
- ◆ International participation

DoD ACTIVITIES



Surveillance

- ◆ Joint Health Surveillance Center
 - Organize existing and proposed DoD health surveillance capabilities to achieve comprehensive, continuous and consistent military health surveillance within the Armed Forces
 - Connect disparate DoD surveillance activities
 - Standardize collection, reporting and analysis of information
 - Enhance DoD global situational awareness
 - Support initial USG integration of medical intelligence within AFMIC
- ◆ Goal: begin implementation by early 2006

Antivirals

- ♦ 24 million doses of Tamiflu purchased
 - Pre-positioned in EUCOM (CENTCOM), PACOM AND CONUS
 - No pediatric formulations – pediatric compounding instructions due by end of 2005
 - Anecdotal and animal data demonstrates efficacy and effectiveness for treatment of current H5N1
 - Resistance documented for Type A influenza
 - 4% adults, up to 20% pediatrics
 - Resistant mutation has resulted in virus that is either incapable of or has decreased infectivity
 - Additional 7 million doses requested-supplemental OMB

Antivirals

- ◆ Tamiflu
 - 24 million capsules purchased
 - 15 million expected 15 December
 - 5 million expected 28 February
 - Remainder mid 2006
 - Release policy completed
- ◆ Relenza
 - Plan to purchase amount to represent 10% of total antiviral supply

Vaccine

- ♦ DoD is positioned to purchase 2.7 Million doses of Avian influenza (H5N1) vaccine
 - Vaccine is based on 2004 Vietnamese clade
 - No cross reactivity to Indonesian clade
 - Will not be available until Spring 2006
 - A minimum of 1.6 Million doses available this year
 - Based on 90ug dose requirement
 - Dosage may be reduced pending adjuvant and other antigen sparing strategies

Communication

- ◆ Pandemicflu.gov
 - National Strategy
 - Pandemic Plans
 - Monitoring
 - Travel
 - Guidance
- ◆ <http://www.deploymentlink.osd.mil>
 - HA Avian flu website
- ◆ DoD readiness watch board

Watch board

Provides leadership with a comprehensive AI situational awareness

- Current disease status
- Countermeasure status
 - Vaccine, Antivirals, Antibiotics
 - PPE, ventilators
- Planning status
 - Status of current planning guidance
 - Provides reference to pertinent documents



Pandemic Influenza

ALERTS: Pandemic Alert Period Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.

Watchboard
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Related Links

- HHS
- CDC
- WHO
- Pandemic Flu

- VA

- USDA

- DoD OSHA

- State

Department

- USAID

- DoD GEIS

Department of Defense Pandemic Flu Stages

Interpandemic Period		National Strategy Goals
Phase 1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.	Strengthen influenza pandemic preparedness at the global, regional, national and sub national levels.
Phase 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.	Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs.
Pandemic Alert Period		National Strategy Goals
Phase 3	Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.	Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases.
Phase 4	Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.	Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.
Phase 5	Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures.
Pandemic Period		National Strategy Goals
Phase 6	Increased and sustained transmission in general population.	Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures.



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Surveillance and Detection

Human Cases (23 Nov 2005)	Weekly Total	Cummulative Total
Countries with Active Animal Outbreaks (15 Nov 2005)	Weekly Total	Cummulative Total (December 2003 to 9 November 2005)
WHO/CDC Assessment (14 Nov 2005)	Weekly Total	Cummulative Total (26 December 2003 to 14 November 2005)
Current AFMIC Assesment (15 Nov 2005)	LOW	
Zoonotic Surveillance (15 Nov 2005)	Weekly Total	Cummulative Total (Dec 2003-Present)

Tamiflu (23 Nov 2005)

Vaccines (23 Nov 2005)





Pandemic Influenza

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Human Avian Influenza Cases

Human Cases Reported for the Week Ending November 18: The World Health Organization (WHO) confirmed five cases, including: in Thailand, an 18-month-old boy from Bangkok; in China, two cases, including a 9-year-old boy from Hunan Province, who recovered, and a 24-year-old female poultry worker who died in Anhui Province; and in Indonesia, two fatalities, a 16-year-old girl and a 20-year-old woman, both from Jakarta. An additional case from Hunan Province, the 12-year-old sister of a confirmed case, was not confirmed by WHO because she died one day after being admitted to the hospital, and was cremated without undergoing testing for H5N1. Her brother was admitted to the hospital the day she died, and received treatment, although no specific information is available. All of the human cases occurred in regions with ongoing poultry outbreaks. All of the victims had contact with sick poultry, including the Bangkok toddler who was playing near them.

Avian Flu Outbreaks		Week Ending Nov. 18, 2005			2005 Cases ¹	2004 Cases ²
Location	Date Reported	Probable Source	#Deaths #Cases	#Deaths #Cases	#Deaths #Cases	
Thailand Bangkok	Nov. 14	chickens	0/1 0/1	1/4	12/17	
Vietnam			0/0	23/66 ³	20/27	
Cambodia			0/0	4/4	0/0	
Indonesia Jakarta	Nov. 17		2/2 2/2	9/13 ⁴	0/0	
China Human Province Anhui Province	Nov. 16 Nov. 16	chickens chickens	2/3 ⁵ 1/2 ⁵ 1/1	2/3 ⁵	0/0	
<u>TOTAL</u>			4/6	39/90 ^{3,4,5}	32/44	

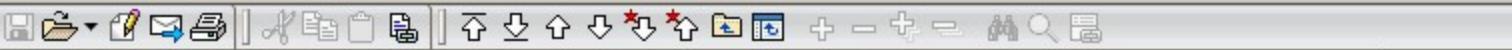
¹The reported cases and deaths are from Mid-December 2004 through November 18, 2005.

²The reported cases and deaths are from late-December 2003 through October 2004.

³One fatal case from Vietnam in September has not been counted yet by WHO.

⁴Two fatalities from Tangerang in July are included here, but not in the WHO official count.

⁵One fatal case from Human Province is a sister of a confirmed case, but will not be officially confirmed by WHO because she was cremated prior to testing for H5N1.



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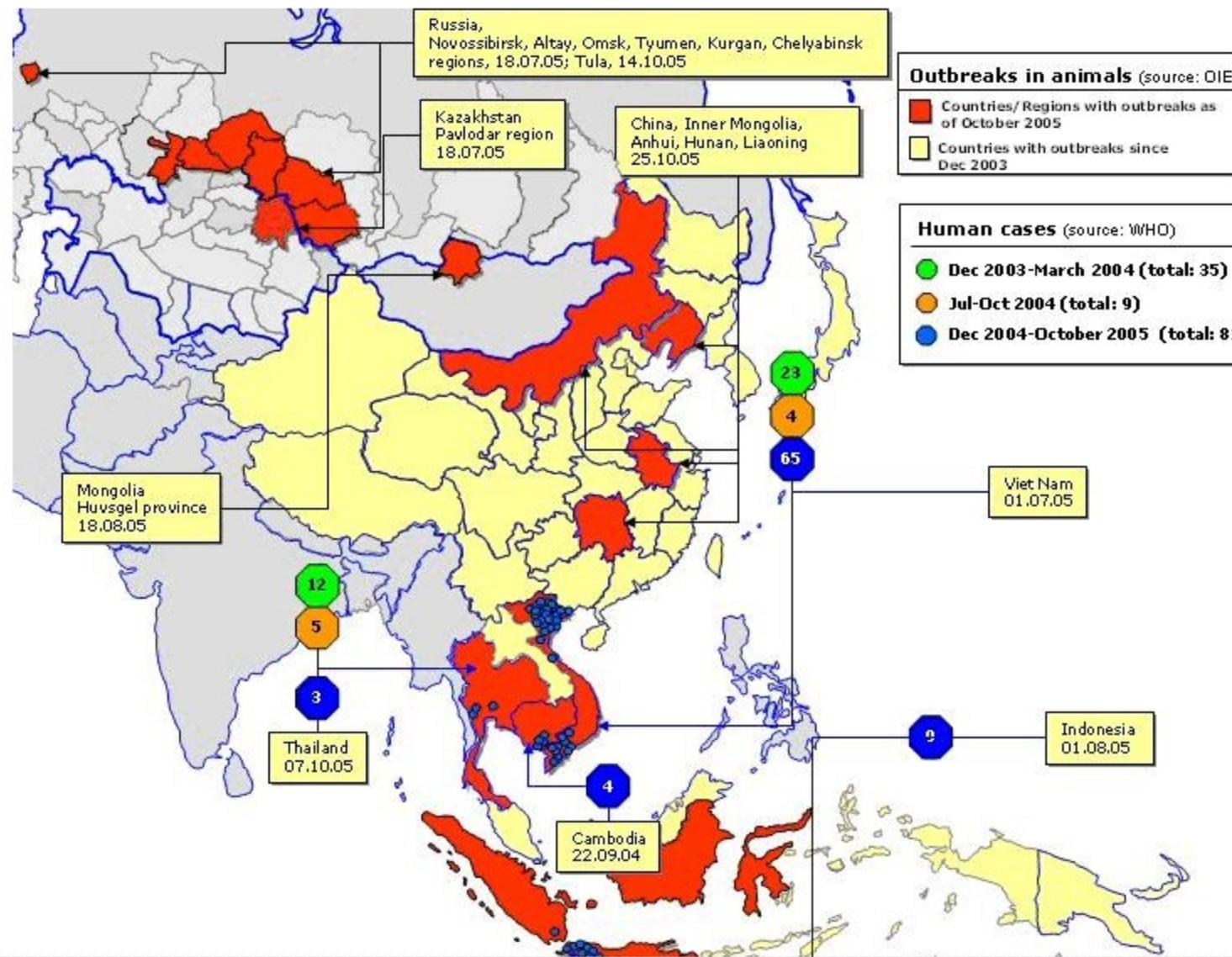
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[Tamiflu \(23 Nov 2005\)](#)

[Vaccines \(23 Nov 2005\)](#)

Animal Outbreaks: There were no confirmed outbreaks in any countries previously free of H5N1, but outbreaks in China (including Hunan and Anhui Provinces), Vietnam and Indonesia continued uncontrolled.



Situation Monitoring and Assessment (Surveillance)

Planning and Coordination

Situation Monitoring & Assessment (Surveillance)

Medical Risk Communication/Management

Prevention and Containment

Health System Response

Medical Equipment Supplies

Action	Status As Of
<u>Seasonal Influenza Laboratory Surveillance</u>	21 Oct 05
<u>Coordinate with GEIS and network of overseas labs</u>	21 Oct 05
<u>Utilize JMEWs for outbreak detection in deployed forces</u>	21 Oct 05
<u>Coordinating with VETCOM in event zoonotic surveillance is appropriate</u>	21 Oct 05

[Archive](#)

Outbreak Monitoring

	Status As Of	Weekly Total	Accumulative
Human Cases	21 Oct 05	1	10
Countries with Active Animal Outbreaks	21 Oct 05	2	4
WHO/CDC	21 Oct 05	3	

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Alerts: Pandemic Alert Period Phase 3: Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.

Interpandemic Period

- [Phase 1](#)
- [Phase 2](#)

Pandemic Alert Period

- [Phase 3](#)
- [Phase 4](#)
- [Phase 5](#)

Pandemic Period

- [Phase 6](#)

Related Links

- [DoD GEIS](#)
- [CDC](#)
- [OSHA](#)
- [HHS](#)

Planning and Coordination

Document	Status As Of	Draft Due	Final
Memorandum to Cocom	21 Oct 05	2 Nov 05	
Draft Memorandum to JS, Policy, Services & C&PP requests	21 Oct 05	2 Nov 05	
EHP&R Review Supplement 8 of HHS Plan Community Disease Control and Prevention	21 Oct 05	31 Oct 05	
Avian Influenza Immunization Policy	21 Oct 05	31 Oct 05	
Tamiflu Stockpile Release and Usage Policy	21 Oct 05	30 Oct 05	
Vetcom HQ Plan for Surveillance Requirements	25 Nov 05	21 Oct 05	24 Oct 05

[Archive](#)

Supplemental Funding

- ◆ 7.1 Billion for National PI Response
 - 6.1 Billion: counter measures
 - 2.8 Billion: advance cell culture techniques
 - 1.5 Billion: vaccine procurement
 - 1.0 Billion: antiviral
 - 800 Million: advanced development
 - 650 Million: domestic surveillance and response
 - 250 Million: international efforts

Supplemental Budget Request

- ◆ 7.1 Billion
 - \$6.7 Billion to Dept of Health and Human Services
 - \$91.4 Million to Dept of Agriculture
 - **\$130 Million to Dept of Defense**
 - \$11.6 Million to Dept of the Interior
 - \$38.5 Million to Dept of State
 - \$27 Million to Dept of Veterans Affairs
 - \$131.5 Million to International Assistance Program

DoD Requests

- ◆ Purchase of Vaccine currently in production
- ◆ Improve world wide avian influenza surveillance programs
- ◆ Equipment
- ◆ Essential information management systems
- ◆ Laboratory diagnostic equipment
- ◆ Military-to-Military assistance

What's next?



Short term tasks

- ◆ Completion of DoD Pandemic Influenza guidance
 - Consistent with HHS and National Plans
 - Clinical Practice Guidelines
 - PHEO role
 - Determine priority groups for vaccine and antiviral use
- ◆ Implementation of Surveillance Center
- ◆ Completion of CoCOMs PI plans
- ◆ DoD role in National Pandemic Influenza Plan

AFEBC Potential Role



AFEB Potential Role

- ◆ Progress has been made but much remains to be completed
- ◆ There is a vital need for an external group of experts to advise the Department on pandemic influenza
 - Clinical Practice Guidelines
 - Modeling
 - Vaccine and antiviral prioritization
- ◆ Request initiated November 2005
 - Form an external and independent AFEB advisory body (select subcommittee) to advise DoD matters relating to pandemic influenza

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